REC'D 01 JUL 2004
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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Rec'd PCT/PTO 24 SEP 2004

Applicant's or agent's file reference	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
4324WO317ASC		
International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/EP 02/13161	22.11.2002	25.03.2002
International Patent Classification (IPC) or both national classification and IPC		
A47J31/06		
Applicant		
ASCASO COMPONENTES, S.A. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
12.09.2003	02.07.2004
Name and mailing address of the international preliminary examining authority:	Authorized Officer
European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Lehe, J Telephone No. +31 70 340-3108

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP 02/13161

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

2-7	as originally filed
1	received on 10.02.2004 with letter of 10.02.2004

Claims, Numbers

2-4	as originally filed
1	received on 10.02.2004 with letter of 10.02.2004

Drawings, Sheets

1/2-2/2	as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐ contained in the international application in written form.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description, pages:

   ☐ the claims, Nos.:

   ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	2-4
	No:	Claims	1
Inventive step (IS)	Yes:	Claims	2-4
	No:	Claims	1
Industrial applicability (IA)	Yes:	Claims	1-4
	No:	Claims	

2. Citations and explanations

   see separate sheet

Re Item V

1. Reference is made to the following document:

D1: EP-A-0 671 141 (ESSEGIELLE SRL) 13 September 1995 (1995-09-13)

2.1. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

2.2. The document **D1** discloses (the references in parentheses applying to this document):

Device for the infusion of coffee, which comprises

- a heat exchanger (12,14,15), provided with water inlet means (16,17) and water outlet means (11) at a higher temperature,
- an infusion mechanism (col. 4, l. 38-40), that comprises a water inlet chamber (42) coming from the heat exchanger and an outlet chamber (54) adapted for receiving the dosage (55),
- and a coffee dosage carrying mechanism (48,53,54),
- the device being characterized in that the heat exchanger, the infusion mechanism and the dosage carrying mechanism are coupled vertically *(in Fig. 1 these elements are coupled vertically)* and integrally in continuation from the other and defining a longitudinal axis (y-y) and in that
- the dosage carrying mechanism comprises a longitudinal movement *(see col.. 4, l. 10-17: when turning, the cup makes a upward-movement because of the bayonet joint (56)))* mechanism *(57,59)* provided with a drive arm (51), capable of rotating in both directions around said longitudinal axis (y-y),
- all of which is adapted in such a way that, once the dosage has been placed in a dosage carrying body of the dosage carrying mechanism, the rotation of the drive arm in one direction brings about the upward vertical movement of the dosage (due to the bayonet joint (56)), placing it in the infusion mechanism outlet chamber, whereas the rotation of the drive arm in the opposite direction to the previous one brings about the downward movement of the dosage used, allowing its extraction.

3.1. Document D1 further discloses (cf. claim 2):

An intermediate body (18) fastened to the heat exchanger and provided with a stepped centred through orifice configuring three successive portions in progressively decreasing section (see fig. 3) from top to bottom, in which the

upper section is adapted for housing a tightening discoidal element (62), provided with a centred through orifice for the water coming from the heat exchanger and a membrane (64),

from which the subject-matter of claim 2 differs in that:

the membrane (64) in is housed in the intermediate portion.

3.2. This combination of the features of dependent claim 2 is neither known from, nor rendered obvious by, the available prior art.

3. Claims 3-4 also meet the requirements of the PCT with respect to novelty and inventive step.

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D E S C R I P T I O N

DEVICE FOR INFUSIONS OF COFFEE

Technical sector of the invention

The object of the invention is a device for infusions of coffee, of the type habitually used in catering and in the home for the infusion of dosages of coffee.

Background to the invention

Multiple embodiments are known of devices for infusions of coffee in pre-measured dosages. Essentially, the known embodiments of such devices comprise a water tank, a heat exchanger, for example, an electrical one, an infusion mechanism and a dosage carrying mechanism. In general, said tank, heat exchanger and infusion mechanism constitute a functional unit, independent of the dosage carrying mechanism, which is coupled and uncoupled from said functional unit for the loading and unloading of the coffee dosage, that is, the dosage carrying mechanism constitutes a unit, which is independent of the device that needs to be coupled and uncoupled by the user in each infusion operation. An example of such a device is disclosed on document EP-A-0671141.

The inventor does not know of devices for coffee infusions in which the heat exchanger, the infusion mechanism and the dosage carrying mechanism are integrated into a single functional unit, wherein the dosage carrying mechanism is accessible by the user for the preparation of the infusion.

Explanation of the invention

The device for coffee infusions object of the invention is characterised in that it comprises a heat exchanger, an infusion mechanism and a coffee dosage carrying mechanism, one being coupled vertically and integrally in continuation from the other and defining a longitudinal axis, in which the heat exchanger is provided with water inlet means and water outlet means at a higher temperature; the infusion mechanism comprises a water inlet chamber coming from the heat exchanger and an outlet chamber adapted for receiving the dosage; the dosage carrying mechanism comprises a longitudinal movement mechanism provided with a drive arm, capable of rotating in both directions around said longitudinal axis, all of which is adapted in such a way that, once the dosage has been placed in the dosage carrying mechanism, the rotation of the drive arm in one direction brings about the upward vertical movement of the dosage, placing it in the infusion mechanism outlet chamber, whereas the rotation of the drive arm in the opposite direction to the previous

C L A I M S

1.-Device for the infusion of coffee, which comprises a heat exchanger (1), provided with water inlet means and water outlet means at a higher temperature, an infusion mechanism (2), that comprises a water inlet chamber (25) coming from the heat exchanger (1) and an outlet chamber (26) adapted for receiving the dosage, and a coffee dosage carrying mechanism (3), the device being ~~is~~ characterised in that the heat exchanger (1), the infusion mechanism (2) and the dosage carrying mechanism (3) are ~~it comprises a heat exchanger (1), an infusion mechanism (2) and a coffee dosage carrying mechanism (3)~~ coupled vertically and integrally in continuation from the other and defining a longitudinal axis (Y-Y), ~~in which the heat exchanger (1) is provided with water inlet means and water outlet means at a higher temperature, the infusion mechanism (2) comprises a water inlet chamber (25) coming from the heat exchanger (1) and an outlet chamber (26) adapted for receiving the dosage;~~ and in that the dosage carrying mechanism (3) comprises a longitudinal movement mechanism provided with a drive arm (31), capable of rotating in both directions around said longitudinal axis (Y-Y), all of which is adapted in such a way that, once the dosage has been placed in a dosage carrying body (30) of the dosage carrying mechanism (3), the rotation of the drive arm (31) in one direction brings about the upward vertical movement of the dosage, placing it in the infusion mechanism (2) outlet chamber (26), whereas the rotation of the drive arm (31) in the opposite direction to the previous one brings about the downward movement of the dosage used, allowing its extraction.

2.-Device according to claim 1, which is characterised in that the infusion mechanism (2) comprises an intermediate body (4) fastened to the heat exchanger (1) and provided with a stepped centred through orifice (12), configuring three successive portions in progressively decreasing section from top to bottom, in which the upper portion (13) is adapted for housing a tightening discoidal element (5), provided with a centred through orifice for the water coming from the heat exchanger (1), and a membrane (7), the water inlet chamber (25) being defined between the discoidal element (5) and the membrane (7), whereas the intermediate portion (14) and the lower portion (15) are adapted for housing a piston (8) provided with a centred through orifice (17), in which a retention valve (9), integral to the membrane (7) is housed and, at its lower end, to a cavity which configures the outlet chamber (26).

3.- Device according to claims 1 and 2, which is characterised in that the dosage carrying mechanism (3) comprises a tubular body (28) that houses a thrust body (29) and a dosage carrying body (30), all of them being arranged co-axially and mutually coupled, in which the